

REMARKS

Claims 16-24, 26 and 28-37 were previously pending in the application.

Claims 16, 17, 20, 21 and 28-37 are rejected.

Claims 18-19, 21-24 and 26 are objected to.

Claims 30-36 are canceled.

New claims 37-43 are added.

Claims 16-19, 21-24, and 26 are amended.

No new matter is added.

Applicant requests reconsideration and allowance of the claims in light of the above amendments and following remarks.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: instant claim 17 recites, “wherein the concave portion includes a dimple type one and a groove type one”; whereas, the specification provides support for “the concave portion may include a dimple type concave portion or a groove type concave portion.” in paragraph {19} page 5. Claim 17 is amended to delete the above limitation at issue. Thus, the objection to the specification is now moot. Also, new claim 42 recites, “the concave portion includes a dimple type one *or* a groove type one.”

Claim Rejections- 35 USC § 112

Claims 21 is rejected under 35 U.S.C. 112, first paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner points out that the figures such as FIGS.11 and 12 reveal that the through-holes are in a convex portion of the tool not in a concave portion; thus, it is not clear as what is meant by “a through-hole type concave portion formed in a sub-cutting face of the shank.” Applicant respectfully traverses the rejection.

On the contrary, “a through-hole type concave portion” can be supported by, for example, FIG. 20 of the present application. That is, the through-holes may be in a concave portion of the

tool according to an embodiment of the present application. *See* Publication page 5, paragraph [0054], 220e of Fig. 20 of the present application, which states,

[0054] The concave portions having various shapes may be, needless to say, combined with each other in various ways. For example, in case of a diamond tool mainly used for a grinding or cutting work (e.g., a saw blade), preferably, the top surface of the tip (the outer circumferential face thereof), i.e., a main cutting face is provided with a concave portion 220d of a groove type formed along the thickness direction, and the side surface of the tip, i.e., a sub-cutting face, is provided with a concave portion 220e of a through-hole type formed in such a way to pass through in the thickness direction. FIG. 20 is a sectional view of a diamond tool according to the invention, where abrasives are bonded to a shank 210 having a concave portion 220d of a groove type and a *concave portion 220e of a through-hole type* using the methods illustrated in FIGS. 7 and 8. In case of a saw blade, the front view thereof is identical to FIG. 4, and thus FIG. 20 can be regarded as a sectional view taken along the line III-III in FIG. 4. (Emphasis added)

Thus, the rejection of claim 21 under 35 U.S.C. 112, first paragraph should be withdrawn.

Allowable Subject Matter

Applicant thanks the Examiner for indicating that Claims 18-19, 22-24 and 26 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Claims 19, 22-24, and 26 are rewritten in an independent form including all the limitations of the base claim and any intervening claims. Thus, all of claims 19, 22-24, and 26 are in condition for allowance.

Claim Rejections- 35 USC § 103

Claims 16-17 and 28-37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 5,007,207 to Phaal.

Claim 20 is rejected under 35 U.S.C. § 103 as being unpatentable over Phaal as applied to claim 16 above, in view of US Patent No. 4,091,792 to Farrell.

Claim 21 is rejected under 35 U.S.C. § 103 as being unpatentable over Phaal as applied to claim 16 above, in view of US Patent No. 4,091,792 to Farrell and US Patent No. 4,624,237 to Inoue. Applicant respectfully traverses the rejections.

Claim 16 is amended to recite, “a cross section of the concave portion taken along a direction perpendicular to the surface of the shank includes a semicircular shape, a semi-elliptic shape, a U-shape, a V-shape, or a wave shape,” which is allowable subject matter drawn from

claim 18, which was indicated as allowable. Thus, claim 16 is now in condition for allowance. Also, dependent claims 17, 20-21 and 28-29, which depend from allowable claim 16, are also in condition for allowance at least for their dependency and their own merits.

CONCLUSION

For the foregoing reasons, reconsideration and allowance of all pending claims of the application as amended is requested. The Examiner is encouraged to telephone the undersigned at (503) 896-2643 if it appears that an interview would be helpful in advancing the case.

Payment of fees is made via electronic filing system authorizing credit card payments for extra claims and/or Petition.

Any deficiency of overpayment should be charged or credited to deposit number 50-5049.

Respectfully submitted,



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